

Computational Design and Testing

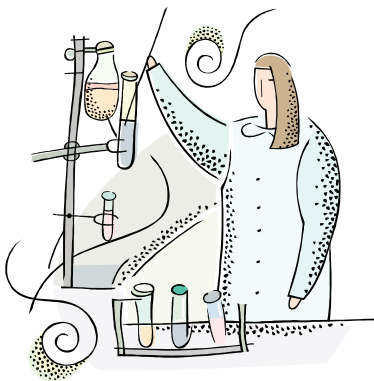
U N I V E R S I T Y O F U T A H

CENTER

The objective of this new Center is to commercialize computational engines that facilitate and accelerate the design and testing of novel materials and device elements, with a special focus on nanostructured materials and devices.

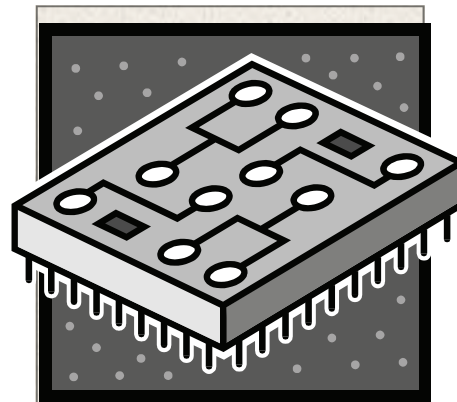
TECHNOLOGY

The center is focused on two computational engines: Materials Designer (MaDes) and Device Simulator (DeSim). The algorithms of MaDes predict the structural and mechanical properties of new materials based on first-principles analysis at the level of atomic forces, while DeSim models the electrical properties and performance of components constructed with novel materials.



ACCOMPLISHMENTS

Several goals have been accomplished in the first two years of funding for this Center. A patent is now pending on the design for a carbon nanotube electromechanical pressure sensor developed with these tools, a web based user interface for on-line computational applications has been successfully demonstrated, and industry-funded work in the electronic component area is moving forward.



THINK TANK

What if there was...

A way to virtually eliminate the need for costly and time-consuming trial-and-error in the development of materials like semiconductors?

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